ABSTRACT

The illustrative embodiment is a simulation system that provides realistic training and practice for vascular-access procedures without using human subjects. The simulator includes a data-processing system and a haptics interface device. The haptics device provides the physical interface for performing vascular-access procedures by manipulating a needle/catheter module to simulate needle insertion, *etc*. Some embodiments of the system include a palpation module, a skin-stretch module, or both. The palpation module provides an ability to practice palpation and occlusion techniques, while the skin-stretch module provides an ability to practice a skin-stretch technique.